Technical Data Sheet

InVivoSIM anti-human CD14 (Atibuclimab Biosimilar)

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**SIM0061**
Clone:	**Atibuclimab**
Isotype:	Human IgG4, κ
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Human CD14
Reported Applications:	Functional assays Flow cytometry ELISA
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤0.5EU/mg (≤0.0005EU/μg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
Aggregation:	<5% Determined by SEC
RRID:	
Molecular Weight:	150 kDa

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

This non-therapeutic biosimilar antibody uses the same variable regions as the therapeutic antibody Atibuclimab, making it ideal for research use. Atibuclimab is a chimeric monoclonal antibody composed of murine variable regions and a human IgG4 Fc region. It targets CD14, a key pattern recognition receptor involved in the detection of pathogen-associated molecular patterns (PAMPs) as part of the innate immune response. CD14 functions as a co-receptor for bacterial lipopolysaccharide (LPS), forming a complex with TLR4 and MD-2 to initiate pro-inflammatory signaling in response to Gram-negative bacterial components. CD14 is highly expressed on monocytes and macrophages, and is less abundantly expressed on neutrophils. It exists in both membrane-bound (mCD14) and soluble (sCD14) forms. Engagement of CD14 by PAMPs such as LPS triggers a cascade of downstream events that result in the production of cytokines including TNF-α, IL-

1β, and IL-6. Atibuclimab binds to CD14 and blocks its interaction with LPS, reducing activation of the TLR4 signaling pathway and limiting the inflammatory response. Atibuclimab has been investigated for the treatment of systemic inflammatory conditions, including sepsis, acute lung injury, and cytokine-mediated disorders. This biosimilar antibody is well-suited for studying CD14-mediated signaling, innate immunity, monocyte/macrophage activation, and mechanisms of anti-inflammatory intervention.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

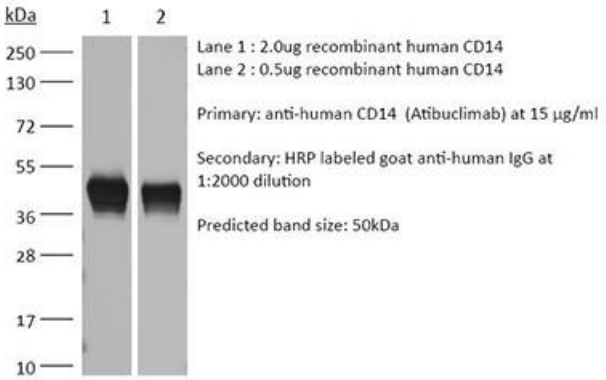
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/sim0061?bxcs=9k1b3a#tab_references or scan the QR code below.

Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail technicalservice@bioxcell.com.



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